We claim:

1. A method of setting the drive and sense frequencies of a gyroscope having a drive mass and a sense mass coupled together by a flexure assembly comprising:

selecting a drive stiffness, K_d;

selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d;

selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s; and

determining whether said gyroscope has obtained desired performance and size envelope characteristics.

2. The method of claim 1 further comprising repeating selecting a drive stiffness, K_d; selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d; and selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s; until it is determined that said gyroscope has obtained desired performance and size envelope characteristics.

3. The method of claim 1 where selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d, comprises selecting length and/or width of at least one individual flexure within said flexure assembly.

4. The method of claim 3 where selecting length and width of at least one individual flexure within said flexure assembly comprises selecting length and/or width of each individual flexure within said flexure assembly.

5. The method of claim 1 where selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s, comprises selecting an orientation of at least one flexure within said flexure assembly relative to other ones of said flexures with said flexure assembly.

6. The method of claim 5 where flexures within said flexure assembly are oriented symmetrically about an axis of symmetry of said gyroscope, and where selecting an orientation of at least one flexure within said flexure assembly relative to other ones of said flexures with said flexure assembly comprises selecting one of a possible number of orientations of said at least one flexure to said axis of symmetry of said gyroscope.

7. The method of claim 1 where said flexure assembly includes at least one pair of flexures, and where selecting a configurational parameter of said flexure

assembly to obtain a desired sense frequency, ω_s, comprises selecting an angle which said pair of flexures makes to each other.

8. The method of claim 7 where said flexure assembly comprises two diametrically opposing pairs of flexures and where selecting an angle which said pair of flexures makes to each other comprises setting a dihedral angle between each of said flexures of said two diametrically opposing pairs.

9. The method of claim 1 where selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d, comprises selecting length, L, and width, w, of four flexures formed into two pairs comprising said flexure assembly, where

$$\omega_d^2 = \frac{4 E w^3 t R^2}{12 L^3 I_d}$$

where E is the Young's modulus of said flexure, t is the process thickness of said flexure, I_d is the rotational moment of inertia of said drive mass about a rate axis, and R is the radius of said drive mass, where said drive mass is a ring-shaped mass.

10. The method of claim 1 where selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s, comprises selecting θ in

$$\omega_s^2 = \frac{4 E w t^3 \sin\theta \, R^2}{12 L^3 I_s}$$

where E is the Young's modulus of said flexure, t is the process thickness of said flexure, I_s is the rotational moment of inertia of said sense mass about a sense axis, R is the radius of said drive mass, where said drive mass is a ring-shaped mass, L is the length of each flexure within said flexure assembly, and w is the width of each flexure within said flexure assembly which is comprised of four flexures formed into two pairs.

11. The method of claim 9 where selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s, comprises selecting θ in

$$\omega_s^2 = \frac{4Ewt^3 \sin\theta R^2}{12L^3 I_s}.$$

12. An improvement in a gyroscope comprising:

a drive mass;

a sense mass; and

a flexure assembly coupling said drive and sense mass together;

where said drive mass has a selecting drive stiffness, K_d obtained by selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d; and where said sense mass as a sense stiffness K_s obtained by selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s, and where said gyroscope has obtained desired performance and size envelope characteristics by independent selection of said geometric and configurational parameters of said flexure assembly.

13. The improvement of claim 12 where said geometric parameters of said flexure assembly selected to obtain a desired drive frequency, ω_d, comprise length and/or width of at least one individual flexure within said flexure assembly.

14. The improvement of claim 13 where said selected length and width of at least one individual flexure within said flexure assembly comprises a selected length and/or width of each individual flexure within said flexure assembly.

15. The improvement of claim 12 where said configurational parameter of said flexure assembly selected to obtain a desired sense frequency, $\omega_{s,}$ comprises a selected orientation of at least one flexure within said flexure assembly relative to other ones of said flexures with said flexure assembly.

16. The improvement of claim 15 where flexures within said flexure assembly are oriented symmetrically about an axis of symmetry of said gyroscope, and where said a selected orientation of at least one flexure within said flexure assembly relative to other ones of said flexures with said flexure assembly comprises a selected one of a possible number of orientations of said at least one flexure to said axis of symmetry of said gyroscope.

17. The improvement of claim 12 where said flexure assembly includes at least one pair of flexures, and where said configurational parameter of said flexure

assembly selected to obtain a desired sense frequency, ω_s, comprises a selected angle which said pair of flexures makes to each other.

18. The improvement of claim 17 where said flexure assembly comprises two diametrically opposing pairs of flexures and where said angle which said pair of flexures makes to each other comprises a selected dihedral angle between each of said flexures of said two diametrically opposing pairs.

19. The improvement of claim 12 where said geometric parameters of said flexure assembly selected to obtain a desired drive frequency, ω_d, comprises a length, L, and width, w, of four flexures formed into two pairs comprising said flexure assembly, where

$$\omega_d^2 = \frac{4 E w^3 t R^2}{12 L^3 I_d}$$

where E is the Young's modulus of said flexure, t is the process thickness of said flexure, I_d is the rotational moment of inertia of said drive mass about a rate axis, and R is the radius of said drive mass, where said drive mass is a ring-shaped mass.

20. The improvement of claim 12 where said configurational parameter of said flexure assembly selected to obtain a desired sense frequency, ω_s, comprises a selected θ in

$$\omega_s^2 = \frac{4 E w t^3 \sin\theta R^2}{12 L^3 I_s}$$

where E is the Young's modulus of said flexure, t is the process thickness of said flexure, I_s is the rotational moment of inertia of said sense mass about a sense axis, R is the radius of said drive mass, where said drive mass is a ring-shaped mass, L is the length of each flexure within said flexure assembly, and w is the width of each flexure within said flexure assembly which is comprised of four flexures formed into two pairs.

21. The improvement of claim 19 where said configurational parameter of said flexure assembly selected to obtain a desired sense frequency, ω_s, comprises a selected θ in

$$\omega_s^2 = \frac{4Ewt^3 \sin\theta R^2}{12L^3 I_s}.$$